DFI-ACP

Revision Control
Long Life Cycle Motherboard

G4V100-M

Intel® 845GV Socket 478 Mini Board

PROCESSOR
- Intel® Pentium® 4 Processor-M (478-pin)
  - 400MHz system data bus
- Supplies IMVP-III voltage current tolerances at VID=1.30V maximum performance mode

CHIPSET
- Intel® 845GV chipset
  - Intel® 845GV Graphics Memory Controller Hub (GMCH)
  - Intel® 82801DB I/O Controller Hub (ICH4)

SYSTEM MEMORY
- Two 184-pin DDR SDRAM DIMM sockets
- 2.5V unbuffered PC1600 (DDR200) or PC2100 (DDR266) DDR SDRAM DIMM
- Supports maximum of 2GB system memory using 64Mbit, 128Mbit, 256Mbit or 512Mbit technology
  - Double-sided x16 DDR SDRAM DIMM is not supported

BIOS
- Award BIOS, Windows® 98SE/2000/ME/XP Plug and Play compatible
- Supports SCSI sequential boot-up
- Supports DMI 2.0 function
- 4Mbit flash memory

ENERGY EFFICIENT DESIGN
- Supports ACPI specification and OS Directed Power Management
- Supports ACPI STR (Suspend to RAM) function
- Wake-On-Events include:
  - Wake-On-PS/2 Keyboard/Mouse
  - Wake-On-USB Keyboard/Mouse
  - Wake-On-LAN
  - RTC timer to power-on the system
- System power management supported
- CPU stopped clock control
- Hardware supports SMI green mode
- Microsoft®/Intel® APM 1.2 compliant
- Soft Power supported - ACPI v1.0a specification
- AC power failure recovery

DAMAGE FREE INTELLIGENCE
- Monitors CPU/system temperature and overheat alarm
- Monitors 5VSB(V)/VBAT(V)/1.5V/3.3V/5V/±12V/CPU(V) voltages and failure alarm
- Monitors CPU/chassis/2nd fan speed and failure alarm
- Read back capability that displays temperature, voltage and fan speed
- Watchdog timer function

ONBOARD GRAPHICS FEATURES
- Graphics memory
  - Shares 512K/1MB/8MB of the system memory in DOS mode
  - Uses Dynamic Video Memory Technology (DVMT) in Windows mode
- Graphics controller
  - Core frequency of 200MHz
  - 350MHz integrated 24-bit RAMDAC
  - Analog display up to 2048x1536 @ 60Hz refresh
  - 3D setup and render engine - Discrete, Triangles, Strips and fans
  - Per pixel perspective corrected texture mapping
  - Software DVD at 30fps, full screen
- 2D graphics features
  - Optimized 256-bit BLT engine
  - 32-bit alpha blended cursor
  - Programmable 3-color transparent cursor
- 3D graphics features
  - 200 megapixels/sec fill rate
  - Maximum 3D resolution: 1600x1200x32 @ 85Hz
  - Flat and Gouraud shading
  - 16- and 24-bit Z-buffering and 16- and 24-bit W-buffering
  - Vertex and programmable pixel fogging and atmospheric effects
  - Double and triple render buffer
- Software drivers
  - Windows® 98SE/2000/ME/XP and Windows NT® 4.0

LVDS TRANSMITTER
- Chrontel CH7017
- Supports scale up to 1600x1200 pixels
- 18-bit and 24-bit outputs
- 2D dither engine
- Support for second CRT DAC bypass mode
- Dual LVDS supporting pixel rates up to 330Mpixels/sec when both 12-bit input ports are ganged together

ONBOARD AUDIO FEATURES
- Realtek ALC202A
- 18-bit stereo full-duplex codec with independent variable sampling rate
- High quality differential CD input
- True stereo line level outputs
- S/PDIF-out interface
- 2-channel audio output
- Speaker-out jack supports 2W amplifier providing better audio quality to the headphone or speakers

ONBOARD LAN FEATURES
- Uses Intel 82562EM fast ethernet controller
- IEEE 802.3, 10BASE-T/100BASE-TX compliant physical layer interface
- IEEE 802.3u Auto-Negotiation
- Digital Adaptive Equalization control
- Link status interrupt capability
- 10BASE-T auto-polarity correction
- Alert on LAN functionality
- LAN Connect I/F
- 1:1 transmit transformer ratio support
- Automatic detection of “unplugged mode”

IDE INTERFACE
- Supports ATA/33, ATA/66 and ATA/100 hard drives
- PIO Mode 4 Enhanced IDE (data transfer rate up to 14MB/sec.)

PROCESSOR SOCKET
- Socket 478

REAR PANEL I/O PORTS
- 2 USB 2.0/1.1 ports
- 1 RJ45 LAN port
- 2 DB-9 serial ports
- 1 DB-15 VGA port
- 1 DB-25 parallel port
- 1 mini-DIN-6 PS/2 mouse port
- 1 mini-DIN-6 PS/2 keyboard port
- 3 audio jacks: speaker-out, line-in and mic-in

I/O CONNECTORS
- 2 connectors for 4 additional external USB 2.0/1.1 ports
- 1 connector for COM 3 (RS232 or LVDS)
- 1 connector for COM 4 (RS232 or RS485)
- 1 44-pin connector for LVDS LCD panel
- 1 LCD/Inverter power connector
- 1 LCD brightness control connector
- 1 front audio connector for speaker-out and mic-in jacks
- 1 CD-in internal audio connector
- 1 S/PDIF-out connector
- 1 connector for IrDA interface
- 1 40-pin IDE 1 connector for 3.5" HDD
- 1 44-pin IDE 2 connector for 2.5" HDD
- 1 floppy connector (FPC connector type)
- 2 ATX power supply connectors
- 1 Wake-On-LAN connector
- 1 chassis open connector
- 3 fan connectors

EXPANSION SLOTS
- 1 PCI slot for PCI expansion card or customized riser card for 1, 2 or 3 PCI slots expansion (for low profile PCI card only)

COMPATIBILITY
- PCI 2.2 and AC ’97 compliant

PCB
- 6 layers, mini board (Mini-ITX compatible)
- 17cm (6.7") x 17cm (6.7")

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